

**REMARKS**

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance.

**I. STATUS OF CLAIMS AND FORMAL MATTERS**

Claims 1-10 are pending. Claims 1-10 are amended, without prejudice.

No new matter is added by this amendment.

It is submitted that these claims are patentably distinct from the prior art cited by the Examiner, and that these claims are in full compliance with the requirements of 35 U.S.C. §112. The amendments and remarks herein are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112; but rather the amendments and remarks are made simply for clarification and to round out the scope of protection to which Applicants are entitled. Support for the amended recitations in the claims is found throughout the specification.

An Information Disclosure Statement will be forwarded to the Examiner shortly.

**II. 35 U.S.C. § 112, FIRST PARAGRAPH, REJECTIONS: WRITTEN DESCRIPTION**

Claims 1-4 and 6-10 were rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in a manner to reasonably convey that Applicants had possession of the invention. The rejection is traversed.

Applicants clearly had possession of the instant invention. To this end, the Examiner is respectfully reminded of the state of the law in *In re Herschler*, 591 F. 2d 693, 700 (C.C.P.A. 1979), where the predecessor court to the Federal Circuit explained that:

The function of the description requirement is to ensure that the inventor had possession of, as of the filing date of the application relied upon, the specific subject matter later claimed by him; how the specification accomplishes this is not material. The claimed subject matter need not be described *In haec verba* to satisfy the description requirement. It is not necessary that the application describe the claim limitations exactly, but only so clearly that one having ordinary skill in the pertinent art would recognize from the disclosure that appellants invented processes including those limitations.

*In re Herschler*, 591 F. 2d 693, 700 (C.C.P.A. 1979) (internal citations omitted).

Against this background, Applicants believe that the instant specification contains sufficient information to make a skilled artisan appreciate that Applicants had possession of the claimed invention at the time of filing. The Examiner's attention is directed to pages 8-10 of the specification which clearly indicate how the compounds of the present invention are made. Further, pages 13-21 of the specification contain **twelve** examples for the production of the instantly claimed compounds. Therefore, possession of the claimed invention clearly exists.

Consequently, reconsideration and withdrawal of the Section 112, first paragraph, rejection are respectfully requested.

### **III. 35 U.S.C. § 112, FIRST PARAGRAPH, REJECTIONS: ENABLEMENT**

Claim 10 was rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking enablement. The rejections are respectfully traversed.

It is respectfully submitted that the assertions in the Office Action that undue experimentation is required to practice the instantly claimed invention are inaccurate. The Examiner is respectfully invited to review *In re Wands*, 8 U.S.P.Q. 2d 1400 (Fed. Cir. 1988), wherein the Federal Circuit stated at 1404 that:

Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. 'The key word is undue, not experimentation.' The determination of what constitutes undue experimentation in a given case requires the application of standard of reasonableness, having due regard for the nature of the invention and the state of the art. The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed ... [Citations omitted].

Against this background, determining whether undue experimentation is required to practice a claimed invention turns on weighing the factors summarized in *In re Wands*. These factors include, for example, (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples of the invention; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims; all of which must be taken into account.

Contrary to the Examiner's allegations to the contrary, the instant invention is enabled. For example, pages 8-10 of the specification clearly indicate how the compounds of the present invention are made. Further, pages 13-21 of the specification contain twelve examples for the production of the instantly claimed compounds. In addition, the methods needed to practice the invention were well-known to the skilled artisan.

Thus, applying *Wands*, the following, *inter alia*, is clear: the quantity of experimentation necessary to practice the invention is low; the amount of guidance in the specification is high; the nature of the invention is not such that "an inordinate amount of experimentation" is required; the relative skill of those in the art is high; the art is predictable; and the breadth of the claims is

narrow. Thus, and contrary to the allegations in the Office Action, undue experimentation would not be necessary to practice the instantly claimed invention.

Consequently, reconsideration and withdrawal of the Section 112, first paragraph, rejections for alleged lack of enablement are respectfully requested.

#### **IV. 35 U.S.C. § 112, SECOND PARAGRAPH, REJECTIONS**

Claims 1-10 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The rejection is traversed.

The amendments to the claims, without prejudice, have rendered the instant rejection moot. Consequently, reconsideration and withdrawal of the Section 112, second paragraph, rejection are respectfully requested.

#### **V. 35 U.S.C. § 103 REJECTIONS**

Claims 1-9 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over three articles by Egholm et al., Varadarajan et al., and Kane et al.; and claims 1-3, 5 and 10 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,846,741 to Griffiths et al., in view of the Varadarajan article. These rejections will be collectively addressed and are respectfully traversed. The cited documents do not teach, suggest or motivate a skilled artisan to practice the instantly claimed invention.

The instant invention is directed to, *inter alia*, oligomers having PNA units substituted by phosphite ester, phosphonic acid or carbaborane functions, and to PNA monomers substituted by phosphite ester, phosphonic acid or carbaborane functions. The Examiner concedes that the Egholm article does not disclose PNAs that are boronated or phosphorylated to increase

hydrophilicity. The Examiner also admits that Griffiths is defective because it does not disclose where the boron atoms would be attached to the PNA.

What the Examiner fails to explain, however, is how a skilled artisan would be motivated to remedy the deficiencies in Egholm and Griffiths with the secondary references Varadarajan and Kane. Further, the Examiner has not shown that a skilled artisan, when combining all of these documents, would have a reasonable expectation that the instant invention could be successfully practiced. In other words, the Examiner has not met the requisite *prima facie* burden to show that the instant invention is unpatentable over the cited documents.

The Federal Circuit is quite clear that there must be some prior art teaching which would have provided the necessary incentive or motivation for modifying the reference teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowitz*, 27 U.S.P.Q. 2d 1063 (BOPAI 1993). Further, "obvious to try" is not the standard under 35 U.S.C. §103. *In re Fine*, 5 U.S.P.Q. 2d 1596, 1599 (Fed. Cir. 1988). And, as stated by the Court in *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, **both the suggestion of the claimed invention and the expectation of success must be founded in the prior art, and not Applicants' disclosure.** *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

Against this background, the rejections fail. More specifically, Egholm and Griffiths are defective. None of the remaining documents remedy these inherent deficiencies, unless hindsight is applied or motivation is gleaned from Applicants' specification.

Further, the Examiner is respectfully reminded that "obvious to try" is not the standard by which an obviousness rejection should be based. And as "obvious to try" would be the only standard that would give the instant Section 103 rejections credence, the rejections must fail as a matter of law.

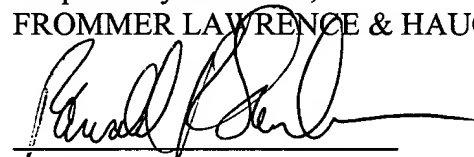
Consequently, reconsideration and withdrawal of the Section 103 rejections are warranted and respectfully requested.

**CONCLUSION**

By this Amendment, the instant claims should be allowed; and this application is in condition for allowance. Favorable reconsideration of the application, withdrawal of the rejections, and prompt issuance of the Notice of Allowance are, therefore, all earnestly solicited.

Respectfully submitted,  
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